LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES

OFFICE OF FISHERIES
INLAND FISHERIES SECTION

PART VI -A

WATERBODY MANAGEMENT PLAN SERIES

IATT LAKE

LAKE HISTORY & MANAGEMENT ISSUES

Chronology

May 21, 2010 - Prepared by:

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LAKE HISTORY

GENERAL INFORMATION

Date reservoir formed
Louisiana Act No. 27 of 1940 stated that there shall be constructed a dam or spillway by the Department of Conservation for the purpose of conserving and holding waters. Louisiana Act No. 23 of 1955 appropriated the sum of $175,000 for the purpose of constructing a dam and spillway on Rigolette Bayou for the purpose of impounding, conserving and storing waters of Iatt Lake. Iatt Lake dam and spillway was completed on December 8, 1956 at an elevation of 80.0 feet mean sea level (MSL). In 1959, it became evident there was an aquatic vegetation problem due to extensive shallow water areas. In 1966, modifications were made to raise the crest from 80.0 feet MSL to the current spillway elevation of 83.0 feet MSL.

Impoundment
Owners – Approximately 4,000 acres of the lake bottom is owned by the State of Louisiana.
A considerable portion of the remainder, approximately 3000 acres, is owned by the estate of Harley and Mary Howcott. Servitude and flowage rights were granted by the family to the Police Jury of Grant Parish in 1955. All other rights including those to timber and minerals were retained by the landowners. This Servitude and Flowage Right Grant signed on 12th day of November 1955 in the Parish of Orleans. See **APPENDIX I**.

Purposes for creation – Louisiana Act No. 27 of 1940 simply stated the dam or spillway was to be built for the purpose of conserving and holding waters.

Size (Surface Area)
7,100 acres

Watershed
Consist of 242 square miles (ratio 21:1) of uplands in southern Winn Parish and eastern Grant Parish consisting primarily of upland pines and hardwood drainages.

Pool stage
83.0’ mean sea level (MSL)

Parish located
Grant Parish

Drawdown description
During normal drawdowns for lake management purposes, the water level is lowered at a rate of 3 to 4 inches per 24 hour period. The maximum drawdown rate is undocumented, however according to elevations listed in Louisiana Department of Transportation and Development (LADOTD) dam inspection documents the water level can be lowered a total of 12 feet.

Spillway
The spillway is 250 foot wide with a crest elevation of 83.0 feet MSL. The spillway is located on the south end of lake.

Description of the Dam

The Iatt Lake Dam consists of a 5,060 foot long earthen embankment that runs along the southwestern shore of the reservoir. The concrete spillway is located approximately 1,750 feet from the south end of the embankment. The LADOTD dam inspection report dated March 28, 2013 states the dam is in poor overall condition.

Dam height is 36 feet.
Structural height is 36 feet.
Hydraulic height is 30 feet.
Maximum discharge is 12,128 cubic feet per second
Maximum storage is 167,000 acre-feet.
Normal storage is 31,000 acre-feet.
Surface area is 7,100 acres.
Drainage area is 242 square miles.

Outlet Works (Drawdown Structure)

The drawdown gates are located on the upstream face of the spillway wall at an invert elevation of 71.0 feet MSL.
Number of gates - 2 (Only one gate is functional at this time)
Gate size - 7' (wide) x 5' (tall)
Condition – Several deficiencies as per Louisiana Department of Transportation and Development (DOTD) Dam Inspection Report dated March 28, 2013. (SEE **APPENDIX II**)
Max flow rate- 12,128 cfs

Who controls

Louisiana Legislative Act 270 of 1984 charged the Louisiana Department of Transportation and Development (DOTD) with the responsibility for maintenance and operation of specified dams including the Iatt Lake Dam and Spillway. The Act states the primary purpose of installing drawdown gates on a spillway structure is safety. The gates also serve a secondary function of facilitating lake management activities by providing water level manipulation. In situations other than an emergency threatening the integrity of the structure DOTD operates the spillway gates for lake management as per written request by LDWF.

LAKE AUTHORITY

- Legislative Act 858 of 1981 transferred the Iatt Lake State Game and Fish Preserve to the Louisiana Department of Wildlife and Fisheries (LDWF).
- Act 728 of 1982 provides for LDWF to assume direct responsibility for certain aspects of the management of Iatt Lake if the governing authority of the parish abolishes the locally appointed "lake commission".
- The Grant Parish Police Jury passed a resolution on June 1987 requesting that the Louisiana Department of Wildlife and Fisheries (LDWF) assume the management of Iatt Lake.
- On July 17, 1987 the Grant Parish Police Jury abolished the Iatt Water Conservation board and requested the LDWF to take over management of Iatt Lake.
- LDWF works closely with the Grant Parish Police Jury when making management decisions concerning Iatt Lake.

Grant Parish Police Jury
200 Main Street
Colfax, La. 71417
318-627-3157

ACCESS

Boat Ramps

There are currently five boat ramps available to the public on Iatt Lake. Abe's Landing is the only private landing on the lake. At this time the access road to this landing is gated and locked. No information is available concerning reopening. In the past, a boat launch fee was charged at Abe's, but no restrooms or other amenities were available. The remaining landings are free to the public, but offer no restroom or vending facilities. (SEE **APPENDIX III**)

Piers

No public fishing piers are available. A limited number of private piers associated with homes and camps are found on the lake. The majority are located in the southern half of the lake.

State/Federal facilities

The U.S. Forest Service constructed and maintains Iatt Lake viewing area located on Iatt Lake. The area is located on the Northeast bank of Iatt Lake and can be accessed by using LA 122 between Dry Prong and Verda. The area provides an extended boardwalk to access a wildlife viewing platform. The area is also equipped with a canoe launch, picnic tables and restrooms. No overnight camping is allowed. (SEE APPENDIX III)

Artificial Reefs

No artificial reefs have been constructed. Abundant aquatic vegetation and woody structure provide extensive natural complex cover.

SHORELINE DEVELOPMENT

State/National Parks

NONE

Shoreline development by landowners

Approximately 40% of the shoreline is privately developed with camps and residential homes. A large portion of the shoreline is prone to frequent flooding and generally unsuitable for development.

PHYSICAL DESCRIPTION

Shoreline length

63.9 miles

Timber type

Iatt Lake has extensive coverage of bald cypress and tupelo, coverage is greater than 80%. Standing timber restricts boat access to a considerable portion of the northern half of the impoundment. Much of the adjacent areas are wetlands that converge with mixed upland timber and pine monoculture.

Average depth

4.5 feet

Maximum depth
19 feet

Natural seasonal water fluctuation
Due to the large watershed annual water fluctuations of 3' to 4'are common and 6' to 7' fluctuations occur periodically.

EVENTS / PROBLEMS

Water Level
Water level fluctuations due to large amounts of rainfall in the watershed can be extensive causing localized flooding of homes, camps and property. In October of 2006, over 20 inches of rainfall occurred in the Iatt watershed. The water level in the lake rose 7 feet above pool elevation and considerable flooding was reported. The flooding problem can be exasperated when high water levels downstream in the Red River slow runoff.

Aquatic Vegetation

Historically, Iatt Lake has been plagued by excessive aquatic vegetation. Due to shallow, clear water aquatic vegetation will continue to remain problematic indefinitely. In addition to native vegetation, hydrilla (*Hydrilla verticillata)* was discovered in fall 1996. A drawdown was initiated from late June through October 1997. The drawdown did not provide sufficient control. The invasive aquatic plant spread throughout most of the lower half of the impoundment and severely restricted fishing and boating by 2008. Following a summer/fall drawdown in 2008 triploid grass carp (TGC) were stocked in the lake in the spring of 2009. The southern portion of the lake where the hydrilla was removed has become re-infested with native submersed vegetation, primarily fanwort (*Cabomba caroliniana*) and bladderwort (*Utricularia spp*.).

Common salvinia (*Salvinia minima*), another invasive aquatic plant species, was discovered in the summer of 2008. By fall 2008, associated problems were considered to be severe. Dense stands of cypress and tupelo impede herbicide applications. Fortunately, severe freezes occurred in consecutive winters of 2009 and 2010 that greatly reduced common salvinia coverage. It began to regrow in the fall of 2012. In addition, giant salvinia (*Salvinia molesta*) was discovered in the fall of 2012. It is likely to cause severe problems for Iatt Lake in the future.

Iatt Lake was surveyed for aquatic vegetation in June and August of 2013. The vegetation coverage was similar to previous years. The only difference was the lack of hydrilla. No hydrilla was observed in the lake. The two dominant species of submersed vegetation was fanwort and bladderwort. Approximately 6000 acres of the lake was infested with this vegetation. Emergent vegetation was prevalent throughout the lake. Approximately 1500 acres water hyacinth and white water lily could be found throughout the lake. Approximately 2000 acres of American lotus was found on the shallow water flats throughout the lake. While the giant salvinia discovery in 2012 was restricted to the north end of the lake, the 2013 survey found small bunches scattered throughout the lake. Giant salvinia acreage was less than 100 acres; however, it has spread over the entire lake. Common salvinia coverage was approximately 100 acres.

MANAGEMENT ISSUES

AQUATIC VEGETATION

Iatt Lake drawdowns for control of aquatic vegetation have been scheduled 14 times since 1961. Actual drawdowns have occurred on 12 occasions. Historically, drawdowns have been conducted every 3 to 4 years. Within a short time following inundation, native submersed vegetation has recovered to problem levels. Early problem vegetation included fanwort, bladderwort, water hyacinth and American lotus.

Hydrilla was discovered in the fall of 1996. The submerged invasive plant soon displaced native vegetation in the lower third of the lake. A summer/fall drawdown initiated in 2008 was followed by extensive hurricane induced high water levels. Hydrilla coverage was reduced in the lower third of the impoundment as a result. In February 2009, Iatt Lake was stocked with 21,300 triploid grass carp. Since that time vegetation monitoring has found no hydrilla regrowth in the lake.

Common salvinia was a major issue in the fall of 2009. At that time, large mats were drifting throughout the impoundment. Problem areas varied and were determined by water current and wind direction. Freezing temperatures that occurred in December of 2009 and January 2010 caused a significant reduction in common salvinia. It was reported by locals who live on the lake that much of the lake was covered with a thin layer of ice for several days.

Giant salvinia was discovered on the north end of the lake near Hog Island Boat Ramp in the fall of 2012. Spray efforts were increased in the area; however it is unlikely that it was eradicated due to the habitat where it was discovered. The area had extensive shallow water and timber which made boat spraying difficult. Due to the extensive cypress-tupelo coverage throughout the lake, giant salvinia is likely to cause severe problems in the future.

Currently, aquatic vegetation is a problem in Iatt Lake. Due to extensive shallow water and cypress-tupelo coverage it is likely that aquatic vegetation will continue to be problematic in the future. Triploid grass carp have removed the hydrilla. However, native submergent vegetation, primarily fanwort and bladderwort has re-grown in the areas where hydrilla was removed. American lotus covers several thousand acres of shallow flats each summer. Without annual freezing temperatures, giant and common salvinia are likely to cause serious problems in the near future.

Type map

Iatt Lake has been type mapped or surveyed for aquatic vegetation sixteen times. The impoundment was first surveyed in 1982. The shallow impoundment has a long history of aquatic vegetation problems prompting 12 drawdowns since 1961. The most recent 2013 typemap is found in **APPENDIX IV**.

Biomass

Biomass sampling was conducted from 1998 through 2003 in Iatt Lake as indicated in Figure 1 below. It documents the introduction and expansion of hydrilla. The use of biomass sampling was discontinued in 2003 in favor of other vegetation sampling methods.

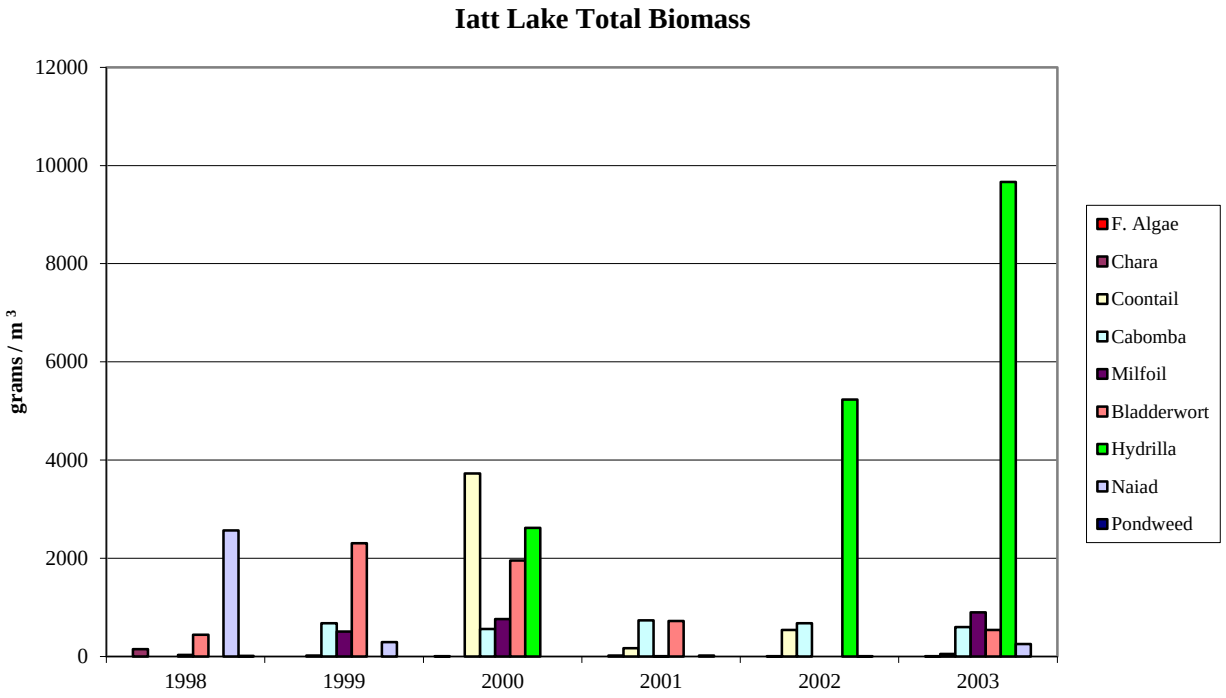

Figure 1. Aquatic vegetation biomass sampling results for Iatt Lake 1998-2003.

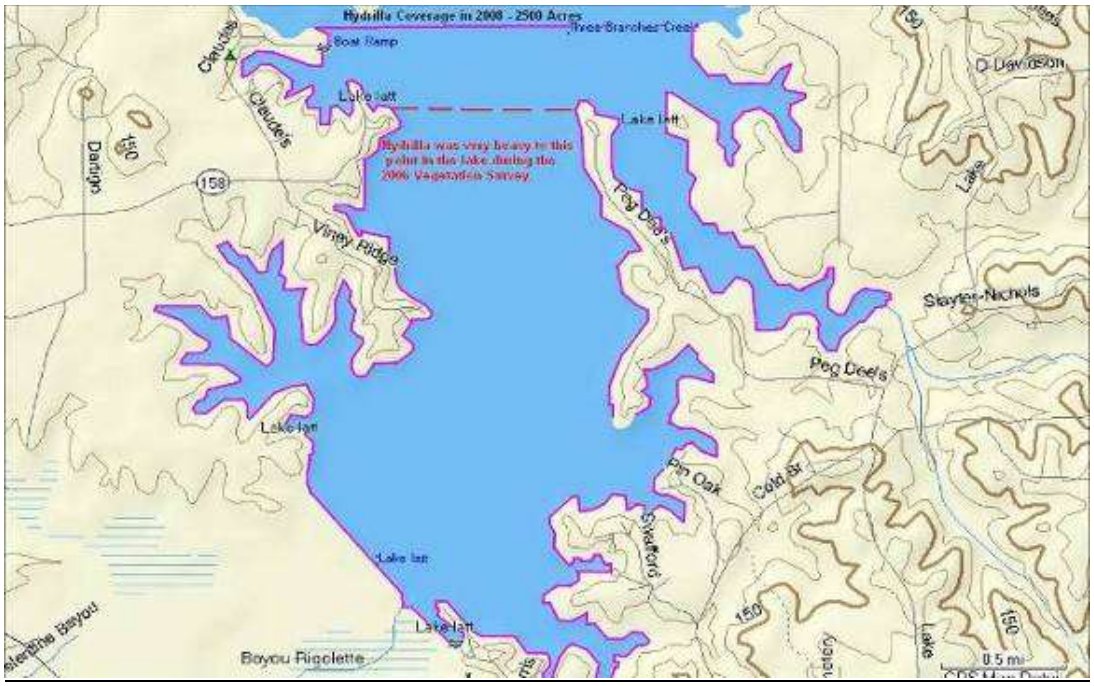

Figure 2. Hydrilla Coverage – Approximately 2500 Acres Prior to Summer 2008 Drawdown

TRIPOLOID GRASS CARP MOVEMENT STUDY

An integrated management plan was implemented in 2005 consisting of a summer drawdowns, limited herbicide applications and a minimal stocking of triploid grass carp (TGC). To address concerns that TGC may leave Iatt Lake during flood events; a telemetry study was developed and implemented.

On April 6, 2005, 7,500 TGC were stocked into Iatt Lake. The carp were 8 to 16 inches in length and were stocked at two locations in the impoundment. A sub group of the TGC was implanted with radio transmitters to determine possible escapement from the reservoirs.

A receiver was permanently mounted on the spillway of Iatt Lake to record the passage of carp tagged with a transmitter. The receiver was operated by a 12 volt battery and monitored periodically. The receiver was checked and maintained every two weeks. Roving surveys were also conducted, utilizing boat and airplane to monitor movement of TGC in the waterbody.

Two sizes of transmitters were used. The smaller transmitters had a battery life of 103 days and were implanted in fish 12 to 14 inches in length. The larger transmitters were implanted in fish 14 to 16 inches in length and had a battery capacity of 552 days. Iatt Lake received 15 small fish and 37 large fish implanted with transmitters.

All transmitter batteries expired by September 2006. No high water events occurred during the period of battery life. As a result, no incidents of TGC migration were recorded.

On March 2, 2007, 24 additional carp 14 to 16 inches long were implanted with transmitters and stocked into Iatt Lake. The transmitter batteries used in the effort were expected to expire by September 2008. No grass carp migration was documented, though water levels remained low throughout the study period.

Treatment history by year available

Biological

2005 Triploid grass carp (7,535) were stocked into Iatt as part of the movement study detailed above.
2008 Triploid grass carp (24) were stocked into Iatt as part of the movement study detailed above.
2009 Triploid grass carp (21,300) were stocked as part of an integrated management plan to reduce submersed vegetation primarily hydrilla.

Chemical

The use of herbicides is an important component of the LDWF integrated pest management program. The proper selection and use of herbicides is essential to achieve cost effective benefits and to avoid damage to non-target species. Each product listed below has been approved by the Environmental Protection Agency for aquatic use. Aquatic vegetation will be treated according to the standard operating procedures for the application of herbicides as adopted by the LDWF Inland Fisheries Section. LDWF spray crews utilize foliar herbicide applications as periodic complaints are received from the public. Also maintenance spraying is conducted to maintain boating and fishing access. For a complete summary of herbicide applications see Table 1.

Herbicide applications in the past have been applied at the following rates:

Glyphosate (Aquamaster, Aquastar, etc.): Used at a rate of 0.75 gallons per acre to treat alligator weed, water hyacinth, and giant and common salvinia during the active growing period.

Diquat (Reward, Knockout): Used at a rate of 0.75 gallons per acre to treat alligator weed, water hyacinth, and giant and common salvinia during the slower growing period or winter months.

Surfactant is added at a rate of 1:4 (surfactant: herbicide) for all herbicides.

Future herbicide applications for the treatment of giant and common salvinia will be in accordance with the Inland Fisheries' official recommendations effective March 18, 2013. Schedule and rates listed below:

April 1-October 31: glyphosate (0.75 gal/acre)/diquat (0.25 gal/acre)/Aqua King Plus (0.25 gal/acre)/ Thoroughbred (12 oz. /acre)

November 1 – March 31: diquat (0.75 gal./acre)/surfactant (0.25 gal/acre)

Table 1. Herbicide applications in Iatt Lake, Louisiana from 1996 to present.

Year	Acres Treated	Vegetation
1996	207	Mixture
1997	3	Hyacinth
1998	551	Hyacinth/Mixture
1999	796	Hyacinth/Mixture
2000	255	Emergent
2001	155	Hyacinth/Mixture
2002	265	Hyacinth/Mixture
2003	60	Emergent
2004	237	Emergent
2005	70	Water hyacinth/Water Lily
2006	339	American Lotus/ Water hyacinth/ Water Lily
2007	356	American Lotus/Common Salvinia/Water hyacinth/Water Lily
2008	108	American Lotus/Common Salvinia/Water hyacinth/Water Lily
2009	857	American Lotus/Common Salvinia/Water hyacinth
2010	127	American Lotus/Common Salvinia/Water Hyacinth
2011	67	American Lotus/Water Hyacinth/Alligator Weed/Common Salvinia/Water Lily
2012	944	American Lotus/Common Salvinia/Giant Salvinia/Water Hyacinth/Alligator Weed/Water Lily/ Water Shield
2013	976	American Lotus/ Common Salvinia/ Water Hyacinth/ Water Lily/Giant and Common Salvinia

HISTORY OF REGULATIONS

Recreational

Statewide regulations for all fish species, the 2013 recreational fishing regulations may be viewed at the link below:
http://www.wlf.louisiana.gov/fishing/regulations

Commercial

The 2013 commercial fishing regulations may be viewed at the link below:
http://www.wlf.louisiana.gov/fishing/regulations

DRAWDOWN HISTORY

Drawdowns have been conducted throughout the history of Iatt Lake. The first drawdown was conducted in 1961. At that time an additional 3' of elevation was added to the spillway. This was done to alleviate aquatic vegetation problems occurring in the shallow waters of the lake. Since 1968, twelve drawdowns have occurred for the purpose of aquatic vegetation control. Complete drawdown history is given in Table 2 below.

Table 2. Drawdown history of Iatt Lake, Louisiana from 1961 to 2008.

DATE	PURPOSE	DEPTH BELOW POOL	GATES OPENED	GATES CLOSED	NOTES
Fall 1961	Dam Maintenance	To main channel	Fall	Fall 1962	Added a 3' cap to the spillway
Fall 1966	Dam Maintenance	5'	Fall		Dam maintenance
1968	Weed Control	7'	Oct 15	Jan 15,1969	
1972	Weed Control		Oct 20	Jan 20,1973	
1976	Weed Control		Fall	Feb 1,1977	
1980	Weed Control	Scheduled for March, but cancelled due to public opposition			
1981	Weed Control	8'	Aug 15	Jan 15,1982	
1987	Weed Control	8'	Aug 7	Jan 1988	
1990	Weed Control Boat Ramp Construction	8'	Sept 17	Unsuccessful due to rainfall	
July '93	Weed Control	8'	July 12	Jan 1994	
June '97	Weed Control	8'	June 16	Nov 1, 1997	
Aug '00	Weed Control	5'	Aug	Jan 2001	
Aug '02	Weed Control	8'	Aug 20	Unsuccessful due to heavy rainfall	
2003	Weed Control	5'	Fall	Cancelled due to Senate Resolution	
June '04	Weed Control Prep for TGC Stocking	8'	June 14	Oct 25, 2004	Closed to Fishing
May '08	Weed Control Prep for TGC Stocking	8'	May 12	Oct 2008	Closed to Fishing

Purpose
Except for drawdowns occurring in 1961 and 1966 which were done to allow work on the dam; Iatt Lake drawdowns have been conducted primarily for aquatic vegetation control.

Success
Drawdowns have provided a reduction in aquatic vegetation biomass in the shallow waters of the lake. Unfortunately, vegetation re-growth occurs quickly in the clear, shallow waters of Iatt Lake. In most years, regrowth occurs during the second growing season following the drawdown.

Fishing closure
Due to extensive dewatering during the drawdowns (80%) and numerous public requests since 2002, the lake has been closed to fishing during drawdowns. The public perception is that large numbers of bass and crappie are caught and removed from the lake while they are confined during the drawdown. Data to confirm this perception is limited, but preliminary analysis supports the premise. LDWF will continue gathering biological data to test this theory. The LDWF Commission voted to close fishing during the 2008 drawdown beginning on June the 9th. On June 23rd the water level was 7.5 feet low. Due to local opposition, Iatt Lake remained open to fishing for approximately 1 month after the lake was significantly dewatered.

Depth below pool
Drawdowns are generally 8 feet below pool stage. Experimental drawdowns of 5 feet below pool stage have been conducted. The 5 feet drawdowns have not been as beneficial as 8 feet drawdowns due to much of the lake remains covered with shallow water. The aquatic vegetation in the shallow water areas is not exposed to drying and is not killed.

Estimated % exposed
When the impoundment is lowered 8 feet below pool stage, approximately 80% of the lake bottom is exposed.

Who operated structure
The Department of Transportation and Development (DOTD) operates the structure as per procedures outlined in Act 270 of 1984. DOTD operates the spillway gates for lake management as per written request by LDWF.

Fish kills
Fish kills caused by low levels of dissolved oxygen have occurred during several Iatt Lake drawdown events.

- A kill of approximately 300 fish occurred during the 2004 drawdown. It occurred in the upper reaches of the lake near JD's boat launch. Fish were apparently isolated in a small backwater area of the impoundment as water receded. Dissolved oxygen dropped below the level necessary to sustain the fish.
- With the impoundment 8 feet below pool elevation in fall of 2008, the exposed lake bottom became covered with terrestrial vegetation. Extensive rainfall caused by Hurricane Gustav refilled Iatt Lake within 48 hours. Decomposition of the flooded terrestrial vegetation caused a severe drop in dissolved oxygen and an extensive fish kill occurred throughout the impoundment.

Fish Disease history, LMBV
Iatt Lake has not been tested for LMBV and has no documented disease history.

CONTAMINANTS / POLLUTION

Fish Consumption Advisory Due to Mercury
Issued: 03/08/06 Last reviewed: 2005

"Women of childbearing age and children less than seven years of age limit largemouth bass and bowfin (Choupique, Grinnel) consumption to no more than ONE MEAL PER MONTH combined. Other adults and children seven years of age and older should consume no more than FOUR MEALS PER MONTH combined largemouth bass and bowfin (Choupique, Grinnel) from the advisory area."
Annual updates can be found at the DEQ link below.
http://www.deq.louisiana.gov/portal/Portals/0/planning/Fish%20Consumption%20Advisory%20Table%20-%203-8-96.pdf

Water quality
Iatt Lake is currently listed as impaired by the EPA because of mercury concentrations.
Water quality concerns noted for the watershed and the related US Environmental
Protection Data is provided in the attached LADEQ link:
http://www.deq.louisiana.gov/portal/tabid/2201/Default.aspx

Water level
Normal pool elevation for Iatt Lake is 83.0 M.S.L. Water levels fluctuate 3 to 4 foot annually. Extreme fluctuations can occur; in October 2006, extensive rainfall caused local flooding and resulted in 7 feet of water running over the spillway.

BIOLOGICAL

Due to the physical characteristics (shallow water, drawdowns, flooding etc.) of Iatt Lake biological fish sampling has been sporadic and limited. Electrofishing has been canceled on frequent occasions due to an extensive coverage of aquatic vegetation especially in the fall of the year. Shallow water and heavy vegetation limits the use of certain sampling gear, including gill nets and lead nets. Genetic sampling was conducted on a small sample of bass (17) in 1990, though no Florida bass were stocked prior. A 3 year mortality study was initiated on Iatt in the spring of 2013. The study follows extensive FLMB stocking that occurred in 2009, 2010, 2011 and 2012. Over one million FLMB fingerlings were stocked. The results of the study will be available following completion in 2015. Prior to 2009 the reason for limited Florida bass stocking is the drastic and frequent drawdowns required for vegetation control on Iatt Lake. It is not a high priority of the department to stock Florida bass in a system that will likely require an 8 foot drawn down within three to five years. The drastic dewatering of a system could allow a high percentage of the stocked bass to be removed from the lake prior to attaining their growth potential.

Fish samples

Table 3. Historical and proposed fisheries sampling on Iatt Lake, Louisiana, from 1967 – 2015.

Year	Sampling Gear
1967	Rotenone
1970	Rotenone
1972	Rotenone
1977	Rotenone
1980	Rotenone
1982	Rotenone
1984	Rotenone
1990	Rotenone; Electrofishing Boom (Fall 1 Station); Electrofishing Forage (Fall 1 Station); Age and Growth (LMB); Genetic Analysis
1991	Electrofishing (Spring 1 Station)
1997	Creel Surveys; Shoreline Seining
1998	Electrofishing (Spring 5 Stations); Frame Net (Fall 4 Stations)
1999	Shoreline Seining (3 Stations); Gill Net (2 Stations)
2000	Shoreline Seining (4 Stations)
2001	Shoreline Seining (4 Stations); Electrofishing (Spring 4 Stations, Fall 2 Stations)
2003	Electrofishing (Spring 4 Stations, Fall 4 Stations)
2005	Electrofishing (Spring 4 Stations, Fall 4 Stations)
2006	Creel Surveys
2007	Electrofishing (Spring 4 Stations)
2010	Electrofishing (Spring 3 Stations)
2011	Electrofishing (Spring 4 Stations, Fall 4 Stations); Electrofishing Forage (Fall 4 Stations)
2013*	Electrofishing (Spring 20 Stations); Electrofishing Forage (Fall) Age and Growth (LMB); Genetic Analysis; Creel Surveys
2014	Electrofishing (Spring 20 Stations); Electrofishing Forage (Fall) Age and Growth (LMB); Genetic Analysis
2015	Electrofishing (Spring 20 Stations); Electrofishing Forage (Fall) Age and Growth (LMB); Genetic Analysis

* Notes the start of 3 year mortality study.

Lake records

No official records are kept for Iatt Lake.

Stocking History

Historically fish stockings in Iatt Lake have been sporadic due to the frequent drawdowns needed for aquatic vegetation control. The most extensive stocking period occurred recently from 2009 through 2012. These stockings occurred following an extensive fish kill in 2008.

Table 4. Historical fish stocking records for Iatt Lake, Louisiana, from 1992 – 2012.

Year	Florida bass (FLMB)	Channel Catfish	Blue Catfish	Triploid Grass Carp
1992		50,000		
1994	145,000-fry 37,895-fingerlings	54,300	54,000	
1995		78,130	9,000	
1996			10,000	
1998	35,300	38,000		
2005	73,135	71,034		15 (13" tagged) 37 (15" tagged) 7,495 (9" non-tagged)
2006	60,591			
2007				24 (1 year old)
2009	71,643	10,322		21, 300
2010	317,784			
2011	317,498			
2012	326,004			

Species profile

As per Freshwater Fishes of Louisiana by Dr. Neil H. Douglas, fish species listed below in Table 5 have been collected or are likely to occur in Iatt Lake.

Table 5. Fishes collected or likely to occur in Iatt Lake, LA

Lamprey Family, PETROMYZONTIDAE
- Southern brook lamprey, *Ichthyomyzon gagei* (Hubbs and Trautman)
- Chestnut lamprey, *Ichthyomyzon castaneus* (Girard)

Gar Family, LEPISOSTEIDAE
- Spotted gar, *Lepisosteus oculatus* (Winchell)
- Longnose gar, *Lepisosteus osseus* (Linnaeus)
- Shortnose gar, *Lepisosteus platostomus* (Rafinesque)
- Alligator gar, *Lepisosteus spatula* (Lacepede)

Bowfin Family, AMIIDAE
- Bowfin, *Amia calva* (Linnaeus)

Freshwater Eel Family, ANGUILLIDAE
- American eel, *Anguilla rostrata* (Lesueur)

Herring Family, CLUPEIDAE
- Gizzard shad, *Dorosoma cepedianum* (Lesueur)
- Threadfin shad, *Dorosoma petenense* (Günther)

Minnow Family, CYPRINIDAE

Blacktail shiner, *Cyprinella venusta* (Girard)
Common Carp, *Cyprinus carpio* (Linnaeus)
Cypress minnow, *Hybognathus hayi* (Jordan)
Striped shiner, *Luxilus chrysocephalus* Rafinesque
Golden shiner, *Notemigonus crysoleucas* (Mitchill)
Emerald shiner, *Notropis atherinoides* (Rafinesque)
Taillight shiner, *Notropis maculatus* (Hay)
Weed shiner, *Notropis texanus* (Girard)
Mimic shiner, *Notropis volucellus* (Cope)
Bullhead minnow, *Pimephales vigilax* (Baird and Girard)
Creek chub, *Semotilus atromaculatus* (Mitchill)

Sucker Family, CATOSTOMIDAE
Lake chubsucker, *Erimyzon sucetta* (Lacépède)
Smallmouth buffalo, *Ictiobus bubalus* (Rafinesque)
Bigmouth buffalo, *Ictiobus cyprinellus* (Valenciennes)
Black buffalo, *Ictiobus niger* (Rafinesque)
Spotted sucker, *Minytrema melanops* (Rafinesque)

Freshwater Catfish Family, ICTALURIDAE
Brown bullhead *Ameiurus nebulosus (*Lesueur)
Black bullhead, *Ameiurus melas* (Rafinesque)
Yellow bullhead, *Ameiurus natalis* (Lesueur)
Tadpole madtom, *Noturus gyrinus* (Mitchill)
Channel Catfish, *Ictalurus punctatus*
Flathead Catfish, *Pylodictis olivaris* (Rafinesque)

Pike Family, ESOCIDAE
Grass pickerel, *Esox americanus vermiculatus* (Lesueur)
Chain pickerel, *Esox niger* (Lesueur)

Pirate Perch Family, APHREDODERIDAE
Pirate perch, *Aphredoderus sayanus* (Gilliams)

Killifish Family, CYPRINODONTIDAE
Golden topminnow, *Fundulus chrysotus* (Günther)
Blackstripe topminnow, *Fundulus notatus* (Rafinesque)
Bayou topminnow, *Fundulus nottii* (Agassiz)
Blackspotted topminnow, *Fundulus olivaceus* (Storer)

Livebearer Family, POECILIIDAE
Western mosquitofish, *Gambusia affinis* (Baird and Girard)

Silverside Family, ATHERINIDAE
Brook silverside, *Labidesthes sicculus* (Cope)

Temperate Bass Family, PERCICHTHYIDAE
White bass, *Morone chrysops* (Rafinesque)
Yellow bass, *Morone mississippiensis* (Jordan and Eigenmann)

Sunfish Family, CENTRARCHIDAE

Banded pygmy sunfish, *Elassoma zonatum* (Jordan)
Green sunfish, *Lepomis cyanellus* (Rafinesque)
Warmouth, *Lepomis gulosus* (Cuvier)
Orangespotted sunfish, *Lepomis humilis* (Girard)
Bluegill, *Lepomis macrochirus* (Rafinesque)
Dollar sunfish, *Lepomis marginatus* (Holbrook)
Longear sunfish, *Lepomis megalotis* (Rafinesque)
Redear sunfish, *Lepomis microlophus* (Günther)
Redspotted sunfish, *Lepomis punctatus* (Valenciennes)
Bantam sunfish, *Lepomis symmetricus* (Forbes)
Florida largemouth bass, *Micropterus floridanus* (Kassler et al)
Northern largemouth bass, *Micropterus salmoides* (Lacépède)
White crappie, *Pomoxis annularis* (Rafinesque)
Black crappie, *Pomoxis nigromaculatus* (Lesueur)

Perch Family, PERCIDAE
Swamp darter, *Etheostoma fusiforme* (Girard)
Slough darter, *Etheostoma gracile* (Girard)

Drum Family, SCIAENIDAE
Freshwater drum, *Aplodinotus grunniens* (Rafinesque)

Genetics

Electrophoretic analysis of LMB has not been conducted for Iatt Lake due to the limited number of Florida bass stocked prior to 2005. Florida bass have not been stocked with regularity because extensive aquatic vegetation problems have resulted in frequent drawdowns. However, approximately 1 million Florida bass fingerlings were stocked in 2009, 2010, 2011 and 2012. Genetic testing was conducted in the spring of 2013 to determine if Florida bass have become more prevalent in the largemouth bass population. The complete record of genetic testing is found in Table 6 below.

Table 6. Genetics of largemouth bass in Iatt Lake, Louisiana in 1990 and 2013.

Year	% Northern	% Florida	% Hybrid	% Florida Influence
1990	100 (N=17)	0	0	0
2013	85.8 (N=97)	1.8 (N=2)	12.4 (N=14)	14.2

Threatened/endangered/exotic species

No threatened or endangered species documented in Iatt Lake at this time.

CREEL (Recreational Angler Survey)

Type of Creel –

Access Point interviews with trailer count

Access points (boat ramps) are selected to maximize the number of lake user interviews. All cooperative anglers passing through designated access points are interviewed. The objective is to

determine a relative index of fishing pressure, catch, harvest, success, and target species of fish. Sampling effort will vary depending on anticipated fishing pressure. Months with heavy pressure will receive 6 days, and months designated as light use will receive 3 days. In an effort to better determine lake use, a trailer count will be conducted at randomly selected times for all public ramps on the lake.

Historic information

1997 – 1998 (Access point with trailer count)

Creel surveys indicate that fishing pressure was heaviest during the 1997 drawdown. During the drawdown, bass harvest rates were 0.4/hr. and crappie harvest rates were 1.6/hr. Fishing pressure dropped from 2.2/hours per acre during the drawdown to 0.26/hours per acre post-drawdown.

2006 (Access point with trailer count)

Creel surveys indicated low usage of the lake for most of the year. The highest usage occurred in January, February, and March prior to aquatic vegetation growth. For the remainder of the year fishing pressure is reduced due to extensive aquatic vegetation. During the 2006 creel, angler catch rates were indicated to be 0.38/hour for bass and 0.04/hour for crappie.

2013 (Access point with trailer count)

The 3 year Mortality Study initiated on Iatt Lake in 2013 is in conjunction with a creel survey. The creel survey is currently underway. It began in January of 2013 and will be completed in December of 2013. The final results of the study will be available following completion of the study in 2015.

HYDROLOGICAL CHANGES

The Iatt Lake dam and spillway was completed in 1956 at an elevation of 80.0 feet mean sea level (MSL). By 1959 it became evident there was an aquatic vegetation problem due to extensive shallow water areas. In 1961, additions were made to the existing spillway to raise the crest to 83.0 feet MSL; the current spillway elevation. Today the average water depth of the lake is only 4.5 feet and aquatic vegetation remains problematic.

WATER USE

Hunting

Duck hunting occurs on the lake. Blind sites are not permitted or regulated and frequent conflicts occur between hunters. Blinds and blind locations are generally handed down from one generation to the next.

Skiing

The area of the lake known as the Rice Patch had a structure in the middle that was used by skiers until the mid-70's but it has since rotted down. The majority of Iatt Lake is not conducive to skiing; most of the lake is too shallow, stumpy, and timbered for safe skiing. Also extensive coverage of aquatic vegetation limits ski opportunities.

Scuba Diving

No scuba diving occurs on Iatt Lake likely due to the extensive submergent vegetation.

Swimming

LIMITED – most of the lake is too shallow, stumpy, and infested with aquatic vegetation for ideal

swimming conditions. However, observations of swimming from a few piers where deep water is available have been made.

Irrigation

Iatt Lake irrigation is limited to a few residential homeowners watering their lawn and gardens.

APPENDIX I

([return to impoundment](#))

SERVITUDE & FLOWAGE RIGHT GRANT

STATE OF LOUISIANA

PARISH OF ORLEANS

WHEREAS, Louisiana Act No. 23 of 1955 appropriated the sum of $ 175,000 to the Department of Public Works, State of Louisiana, for the purpose of constructing a dam and spillway on Iatt Lake in this parish and state, for the purpose of impounding, conserving and storing the waters of said lake;

WHEREAS, the construction of said dam and spillway on the said lake will cause the waters of the said lake to flow over and inundate certain of our property in Sections 2, 3, 10, 11 and 27, Township 7 North, Range 3 West, Grant Parish, Louisiana;

NOW, THEREFORE, for the consideration hereinafter shown, we, HARLEY B. HOWCOTT, individually, a resident of New Orleans, Louisiana, of full age, and MRS. MARY HOWCOTT BARNES, married once and then to William Preston Barnes, herein represented by Harley B. Howcott, Agent and Attorney in Fact, the owners of certain lands within Sections 2, 3, 10, 11 and 27, Township 7 North, Range 3 West, Grant Parish, Louisiana, collectively hereinafter referred to as Grantors, do hereby grant and convey unto the Police Jury of Grant Parish a servitude and flowage right on, over, across and to so much of the lands owned by us in the said Sections, as may be affected by the construction of the said dam on Iatt Lake, as aforesaid, which said servitude and flowage right shall include the right and privilege to flood, inundate and otherwise cause the said land to be covered by the waters of the said Iatt Lake during normal or flood stages, as the case may be.

The proposed dam will be constructed to maintain the lake pool stage of 80.0 feet m.s.l.

The proposed dam will be constructed within at least 2,000 feet of the present existing dam.

As a further consideration of the granting of this servitude the said lake will be drained at least every 3 years.

The consideration for this grant or conveyance are the grant by others similarly situated of like servitudes and flowage rights, the sufficiency and adequacy of which consideration are hereby acknowledged.

This grant is made without warranty, expressed or implied.

All rights in and to the property hereinabove described, other than

the servitude herein specifically granted, are reserved to Grantors, and Grantors specifically reserving to themselves, their heirs, lessees and assigns the right to cut and remove timber, the right to enter upon the land and explore for oil, gas, sulphur and other minerals, by whatever method or process Grantors their heirs, lessees and assigns may elect to use, reserving all rights of ingress and egress for exploitation, development, storing and removing all or any of said minerals from said land, and particularly the right to erect surface and/or underground storage tanks and to construct pipe lines on said land.

Grantors further specifically reserve all of their rights to claims for damages that might occur to the standing cypress and other timber located on this property which arise out of or result from the inundation thereof.

THUS DONE AND SIGNED in the presence of the undersigned competent witnesses on the 12th day of November, 1955.

WITNESSES:

Malcolm L. Monroe

Thelma de la Houssaye

Harley B. Howcott, Individually

Harley B. Howcott, Agent and Attorney in Fact for Mrs. Mary Howcott Barnes

STATE OF LOUISIANA
PARISH OF ORLEANS

Before me, Bartholomew P. Sullivan, Jr., Notary Public in and for the Parish of Orleans, on this 12 day of November, 1955, personally came and appeared HARLEY B. HOWCOTT, individually and as Agent for Mrs. Mary Howcott Barnes, and in the presence of me, the said authority, and of Malcolm L. Monroe and Thelma de la Houssaye, competent witnesses declares:

That he acknowledges that he is the identical person who executed the foregoing instrument in writing; that his signature thereto is his own and true signature; that he executed the said instrument of his own free will and for the purposes and considerations therein expressed.

THUS DONE AND PASSED on the day and date hereinabove written in the presence and before the named and undersigned competent witnesses, who have hereunto subscribed their names, together with said appearer and me, Notary, after reading of the whole.

WITNESSES:

Malcolm L. Monroe

Thelma de la Houssaye

Harley B. Howcott, Individually

Harley B. Howcott, Agent and Attorney in Fact for Mrs. Mary Howcott Barnes

Bartholomew P. Sullivan, Jr.
Notary Public

BARTHOLOMEW P. SULLIVAN, JR.
Notary Public, Parish of Orleans, State of La.
My Commission is issued for life.

ACCEPTED AND AGREED TO
November ,1955
POLICE JURY, GRANT PARISH
BY

APPENDIX II

(return to outlet)

Iatt Lake Dam Inspection-2013

APPENDIX II

Iatt Lake Dam Inspection-2013

ECM Consultants, Inc.

Engineers • Architects • Construction Managers

4409 Utica Street, Suite 200
Metairie, LA 70006
Phone (504) 885-4080
Fax: (504) 885-1439

Email: mail@ecmconsultants.com
Web: www.ecmconsultants.com

5420 Corporate Blvd., Suite 306
Baton Rouge, LA 70808
Phone (225) 615-7885
Fax: (225) 615-8548

April 26, 2013

Mr. Bradley A. Sticker, P.E.
Water Resources Engineer
LADOTD District 08
3205 Horseshoe Drive
Alexandria, LA 71301
Tel.: (318) 561-5280, Fax: (318) 561-5288

Re: **Iatt Lake Dam Inspection Report**
State ID No. 22-00018
Grant Parish

Dear Mr. Sticker:

The above-referenced dam was inspected on March 28, 2013, by members of ECM Consultants, Inc. engineering staff, on behalf of the Louisiana Department of Transportation and Development Dam Safety and Water Resources Section. This periodic inspection was performed under the provisions of the Louisiana Dam Safety Program.

A copy of the inspection report is enclosed. The following items require attention:

1. **There are two large slides on the upstream slope of the northern embankment (See Photo Nos. 5 through 8). The water in the reservoir near the slides is turbid. LADOTD District 08 personnel reported that the slides are in the same locations that were repaired in 2010, and stated that there is a pending work order to investigate the cause of the upstream slope failures. Once a cause is determined, the solution must be implemented as soon as practicable. The slides are very close to the crown of the embankment.**

2. **There are numerous soil shrinkage cracks throughout the embankment (See Photo No. 9). The embankment is to be monitored for potential slides and corrective action taken, when necessary.**

3. **There are no warning buoys and/or signs upstream of the spillway (See Photo Nos. 15 through 17). Warning buoys and/or signs are to be placed upstream of the spillway.**

4. **The northern drawdown gate in the spillway wall is inoperable (See Photo Nos. 25 and 26). The northern drawdown gate is to be repaired or replaced.**

5. **The limit nut and the protective stem cover for the southern drawdown gate stem are missing (See Photo Nos. 24 and 26). A new limit nut and protective stem cover are to be installed.**

6. **The spillway walkway handrails are beginning to rust (See Photo No. 23). The handrails are to be sandblasted and repainted.**

7. **There are cracks throughout the spillway's southeast retaining wall (See Photo No. 19). The cracks are to be monitored and repaired, as necessary.**

8. **Several trees and some light brush are growing in the rock riprap surrounding the spillway structure (See Photo No. 22). The rock riprap is to be cleared of vegetation periodically.**

9. **Large trees are encroaching on the upstream slope (See Photo No. 4). Trees and brush smaller than six-inches in diameter are to be cut from the embankment and for a minimum distance of 10 feet beyond the toe of the embankment. Trees six-inches and larger in diameter are to be extracted from the embankment and for a minimum distance of 10 feet beyond the toe of the embankment. After removal of the trees, the root ball voids are to be filled and a protective grass cover is to be established on the embankment slopes.**

10. **There are some vehicular ruts in the upstream slope (See Photo No. 10). Vehicular ruts are to be filled, compacted, and re-graded.**

Please correct the above listed items and submit written notification of actions taken to: Mr. Bo Bolourchi, P.E., LA DOTD Dam Safety and Water Resources Section at P.O. Box 94245, Baton Rouge, LA 70804-9245, and send us a copy of the letter.

Enclosed also please find the guideline "Sequenced Plant and Animal Penetration Repair Pamphlet" for your information and use.

For additional guidance please see: www.fema.gov/plan/prevent/damfailure/publications.shtm. Review FEMA publications Technical Manual for Dam Owners: Impacts of Animals on Earthen Dams (FEMA 473) and Technical Manual for Dam Owners: Impacts of Plants on Earthen Dams (FEMA 534).

Also enclosed is a performance survey and self-addressed postage paid envelope. Please fill out the survey form and return to DOTD.

Please call me at (504) 885-4080, if you have any questions, or if you require additional information.

Sincerely,

Babak Naghavi, P.E.
Vice President

BN
Enclosures
cc: Mr. Bo Bolourchi, LADOTD
Mr. Richard Moses, LDW&F
Mr. Jimmy Bryant, Grant Parish Police Jury

APPENDIX III

(return to Boat ramps)

Access Points/Boat Ramps

#1 Public Landing	#4 Hog Island Landing Forest Service Day Use Area
#2 Hyde's Landing	#5 J D's Landing
#3 Abe's Landing / Closed	#6 International Paper Landing

APPENDIX IV

(return to typemap)

Iatt Lake

Vegetation Type map

June and August 2013

Iatt Lake, northeast of Colfax in Grant Parish, is a 7100 acre lake. It is a flooded swamp type impoundment with 80% of the surface covered with cypress and tupelo timber. It was surveyed for the presence of aquatic vegetation in June and August of 2013.

As in past years, the majority of the lake was infested with vegetation. Greater than 80% of the lake area was infested with submersed vegetation primarily fanwort and bladderwort. Additional submersed vegetation included coontail, southern naiad, and filamentous algae. The only area of the lake without submersed vegetation was the deep water channels. Unlike recent years no hydrilla was observed. Triploid grass carp stocked in 2009 have apparently alleviated hydrilla, at the current time.

Emergent vegetation was found throughout the lake. The dominant emergent vegetation observed was American lotus. Numerous additional species observed included water hyacinth, white water lily, pennywort, alligatorweed, common and giant salvinia, and duckweed to name a few.

Vegetation Type map - June and August 2013

Area 1 – 75 % American lotus, 30% water hyacinth, scattered common and giant salvinia, fringe of alligator weed and pennywort
Area 2 – 40% American lotus, 40% water hyacinth, mixed with white water lily, scattered common and giant salvinia, fringe of alligator weed and pennywort
Area 3 – 30% American lotus, 20% water hyacinth, mixed with white water lily, fringe of alligatorweed and pennywort
Area 4 – 80% American lotus, scattered common and giant salvinia